A HISTORY OF SHIKAR IN INDIA

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(With four plates)

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INTRODUCTION

The India of our subject includes the whole sub-continent, also Burma and Ceylon. We have to pass in review the Indus Valley flanked by the Kirthar, Baluchistan and Suleiman Ranges and then see Kashmir and adjacent territories of Baltistan, Ladak and Changchenmo, Zaskar, Rupshu, Spiti and Lahoul all of which are a vast entourage of snowy mountains, riven ravines and precipices; of plateaux and lofty ranges which remain an everlasting wall between India and the rest of Asia.

'Northwards soared the stainless ramps of huge Himala's wall.'

Where the mountains have a northern aspect they are usually forest covered, while the southern slopes and folds of the hills are often

bare and dry, subject to forest fires and the depredations of domestic flocks and herds.

> *' Lower grew the rose oaks and the great fir groves where echoed pheasant's call and panther's cry.'*

Continuing east we pass over the wooded and often mountainous tracts of the Simla Hill States, Garhwal and Kumaon until we meet the five hundred mile long exclusive Kingdom of Nepal. Then we see Sikkim and the dense forests of Bhutan, which have been almost unknown to British sportsmen of the past and present alike, until we arrive at the northern part of Assam, so often devastated by earthquakes. Here we may remark that the animals of the Eastern Himalayas resemble those of the Burma region, while along the mountains to the westward are kinds more akin to those inhabiting the temperate parts of Asia. Passing over Burma, Tenasserim and the Malay Peninsula we view Java and Sumatra and then turn west for Ceylon. Within that enormous arc is the Peninsular India with which our subject largely deals.

What is sport?

It can be said that all sport is governed by unwritten laws, and the general tendency is to give the animal a sporting chance of escape, also to make the sport as great a test as possible consistent with the object in view—the death of the quarry. It may also be defined as measured by difficulty in achieving success.

The Pre-Mogul Period

The physical aspects of the Indus valley have undergone many changes. No longer are there the forests which provided timber for the first Indus flotilla constructed by Alexander in 325 B.C.; gone are the rihinoceros and the elephant; gone are the swamp deer, and the last tiger was shot in 1886. Hog-deer, wolves, chinkara, wild dogs, jackals, hares, cats, and the hyena very rarely, now comprise the larger animals of the Indus valley. The Indian Antelope (Blackbuck) has been introduced into the Khairpur territory.

In the early Jain and Buddhist periods (*c.* 600 B.C.) there was considerable knowledge of mammals, birds and reptiles, but previous to the appearance of the Emperor Babur on the scene there is little information concerning shikar.

The Mogul Period

From 1526 to 1707 much of interest is contained in the memoirs of the Mogul Emperors and the chronicles of European travellers in India in those times. The famous illustrated copy of the Ain-i-Akbari, bearing the signature of the Emperor Jehangir, in the Victoria and Albert Museum should be seen by all who can do so. In the series by Sálim A. Ali on ' The Mogul Emperors as Sportsmen and Naturalists ' we learn about the hunting methods practised in those days; and this is aided by Handley's valuable illustrated article. These two contributions afford a remarkably full picture of the shikar methods and natural history knowledge of the period. The shikar grounds of the Moguls

Photo *Theodore Hubback*

Indian Elephant (*Elephas maximus*)

Photo *H. E. Tyndale*

Great One-horned Rhinoceros (*Rhinoceros unicornis*)

were the upper valley of the Indus towards Peshawar, and the whole of the present U.P. westward from the Ganges to Kathiawar and southwards to Mandla in the Central Provinces.

The Shikar Animals of the Moguls

Elephant, rhinoceros, buffalo were known to the Moguls, but not the 'Bison'. When the Moguls first entered India in 1526, the rhinoceros was along the Indus, and the elephant in many places whence it has since vanished. Akbar was specially interested in trapping wild elephants. At the present time there are no longer any elephants north of the Dehra Dun Siwaliks; the rhinoceros lives only in Nepal, Bengal and Assam; the wild buffalo in those same areas, while a few herds survive here and there in Orissa, Raipur, Jeypore and Bastar.

The Larger Felines: The Emperor Babur was a fine sportsman, as also was Akbar, while Jehangir excelled as a naturalist. Akbar disliked the less hazardous methods of tiger-hunting—traps, nets, limed leaves. etc.—and preferred to attack these animals openly with bows and matchlocks.

In Mogul days, and as late as the 1830's lions were numerous in Hindustan. Jehangir killed them in Malwa, and the Rev. Terry (*c.* 1650) was frequently terrified by them when passing through the then vast jungles of that country.

The Mogul Emperors quickly discovered the delights of Kashmir, but there is little record of what they did there in the way of shikar. Abul Fazl mentions that the snow leopard was tracked in the snow in Kashmir, but since this is a very elusive animal, seldom seen by sportsmen, it is more likely that this had reference to the common leopard or panther. This is still considered a fine sport by the few who have done it; Ward's series should be seen.

Bears: Of bears there seems to be almost no mention in the Mogul literature.

Deer: Nor do we find much about hunting of Deer in the Mogul days. A net was put round the horns of a tamed deer and the horns of the wild one became entangled. It is related that one of the deer 'caught' a leopard which became entangled in the net. The species of deer referred to is not clear. Another form of hunting was by means of a light inside a basket on a man's head; the animals attracted were shot or speared. The modern poacher uses electric torches or other contrivances and buckshot cartridges.

Antelope and Gazelle: There must have been a very great number of antelope (blackbuck), nilgai and gazelle in all the areas suited to them. All the Emperors, Jehangir in particular, were extremely fond of hunting the nilgai and spared no personal effort in pursuit of sport where this species was concerned. Blackbuck were trained as decoys to take the wild ones by the net method. That same device is in use in a part of South India at the present time.

Hunting with the Cheetah: This is a pastime indulged in by many notables in India since very early days. The Mogul Emperors were partial to the sport, and Akbar kept a thousand of these

animals. Three sets were khācăh (' Royal ') or for use of the sovereign. The monarch's best leopard, by name *Samand malik* ('like a ruby '), rode in a *chandol*, or litter borne on the necks of two horses.

In a wild state the cheetah hunts antelope, gazelle and the smaller deer, also hares, peafowl and other birds and the smaller mammals, but for sport it is mostly trained for blackbuck. The buck is struck down at full speed, not by blow of a paw only as is commonly stated, but by use of the large-taloned dew-claw which gives the necessary purchase. Blackbuck can attain a speed of 42 miles per hour when hunted and going all out. The cheetah is an animal partial to rocky and open country and was soon shot out when the land became more developed. They were frequently found in packs, and there is record of a cavalry officer having in one day speared six off one horse. The animals having become exceedingly scarce in India, the supply for sporting purposes comes—or used to come latterly—from Africa. The animals have to be trapped when full grown; if taken as cubs the training is tedious and unsatisfactory.

The Caracal—' Siah-gōsh ' as the Moguls knew it—is easily tamed, and was trained in the same way to kill gazelle and the smaller deer, foxes, hares, peafowl. Vigne witnessed the sport and says their speed is, if possible, greater in proportion even than that of the cheetah.

Falconry: The antiquity of falconry is known to be very great, and it is certain that the Moguls gave much impetus to the sport in Northern India. In the Sálim Ali series we have something, also in Handley's ' Sport in Indian Art ', where we learn that Akbar hunted with trained falcons and hawks of which his favourite was the *bashah* (Sparrowhawk). In the Ain-i-Akbari names of many varieties are given, and the names of those in use in Sind are in Langley's book.

The famous French physician, Bernier, relates of the Emperor Aurangzeb that there passed before him at his daily Court, or Public Audience, ' . . . every species of the birds of prey used in field sports for catching partridges, cranes, hares, and even it is said for hunting antelopes, on which they pounce with violence, beating their heads and blinding them with their wings and claws.'

Fishing: The Mogul Emperors were partial to the ancient sport of fishing, in which connection Sálim Ali and Hora should be seen. It is common knowledge that Muhammadans of the present day all over India are much addicted to angling with rod and line in both rivers and lakes ; and there are many anglers in Bengal and other parts of India also.

The Post-Mogul Period

Tiger and Lion: Judging by the number of tigers and other game in a seventy by thirty-mile area near Neemuch in the years 1850-1854 as related by Rice, and the mention by Newall of a railway official having killed one hundred tigers in Rajputana owing to the facility with which he could move about, the quantity of game in the time of the Moguls must have been very great. Gordon Cumming takes the modern record to the Tapti river border (in 1862 ten tigers in 5 days); Montague Gerard killed 227 tigers in Central India and Hyderabad before he left in 1903; Prideaux of the Central Provinces

shot 147 tigers during his service up to about 1930. Forsyth, Hicks, Glasfurd, Burton and others fill in the period 1845 to 1905 as to the land of hills and plains from the Narbada to the Kistna. For Madras and Ceylon there are Campbell, Hamilton, Sanderson, Samuel Baker, Dawson, Drury, Fletcher and some more.

In regard to Orissa, Bengal, Assam, and Bihar to the Siwaliks we have Williamson, Okeden, Kinloch, Simson, F. W. Pollok, E. B. Baker Fayrer, Baldwin, Braddon, MacIntyre, Adams, Lambert, and others to fill in the hundred years from 1780 to about 1880.

In 1852 a tiger killed an officer of the 98th Regiment 23 miles from Rawalpindi; there was a man-eating tiger near Poona in 1849; and there are interesting records of tigers on the islands of Bombay and Salsette. Owing to increase of cultivation and decrease of forests, tigers are in less number than formerly. Although people are still killed by them in some tracts they are necessary to the forest economy, as are the deer and wild pig on which they are meant to exist, so neither the tigers nor their natural prey should be unduly destroyed by man.

It is said in the *Bengal Sporting Magazine* of 1837 that within 23 years of occupation of the country (after the Mahratta Wars) the lions were extinct in the dry and sandy deserts of the Hariana. In 1832–33 cavalry officers at Rajkot shot lions from horseback; and Colonel D. of the cavalry killed eighty lions while in Kathiawar, one of them being 10 ft. 6 in. long with an 18 inch mane. With another gun (Rice ?) he killed 14 lions in 10 days in the Gir forest. There are now no lions out of Kathiawar, and the number in the Gir is estimated to be 247.

Panther or Leopard: Panthers are more ubiquitous than the tiger and less affected by the advance of cultivation. In proportion, the animal is more destructive than the tiger, and under favourable circumstances is more deadly as a man-eater being more agile and active, also more silent and more stealthy. He climbs better, jumps better, and stalks better than the tiger, and can conceal himself almost anywhere.

Thomas Vigne was in Kashmir in 1835 and his book would be a useful reference were it not so rare and difficult to obtain. Adams was a naturalist and ornithologist rather than a sportsman. From his book, and from Newall and MacIntyre who were also in Kashmir about 1851–52, it is known there was then much game in those countries. Not long after that the writing was already on the wall. Far too many animals were shot by sportsmen; and the people of the country, then as now, took heavy toll during the winter months.

The conclusion from perusal of all the old sporting books, dealing also with Kashmir and Burma, is that the steady diminution of all the game animals began about 1780 as to Hindustan, 1840 as to the Western Himalayas, later as to Burma, and is now nearing its climax unless it is halted by all the governments.

In Williamson's day there was the sport of riding on the neck of a 'koomkee'—a female elephant used as decoy in capturing a male—and throwing a noosed rope round the head of a wild tusker. 'This kind of sport,' says Williamson, 'cannot be classed among the effeminacies of the day!' The hunting by tracking of the rogue elephant was declared by Sanderson to be the greatest of all sports; and is still available from time to time.

Crocodiles: Of the two species of crocodile known in India the river crocodile of the burning ghats and other places takes a man when it has a chance, while the estuarine species is a very dangerous reptile. The Indian Gharial is a fish-eater and not feared by man. Concerning crocodiles and the gharial there are more than fifty Miscellaneous Notes in the Society's *Journal* ; among which harpooning in tanks, gharial catching in the Indus river, hints on shooting crocodiles, angling for crocodiles, and poisoning of crocodiles ! The shooting of these animals in India can be excellent sport and calls for considerable technique and knowledge of the animals. In jungle streams and pools they take considerable toll of wild life. At p. 75, vol. 1 of Langley's book is a visual account by an officer of a tiger being vanquished by a large mugger.

The Sloth Bear and the Malayan Bear : Up to sixty years ago the Sloth Bear was really plentiful all over the forested tracts of India and Assam from the base of the Himalayas to Ceylon. Because of its aggressive habit when chanced upon in the jungle, the hand of man is against it, so it is now almost or quite extinct in places where formerly numerous. Nowhere has it been protected under shooting rules. Many of these bears were speared from horseback by Colonel Nightingale in the 1860's. This noted sportsman died in the saddle in 1868 while spearing a panther. The Sloth Bear will probably survive through protection in some of the National Parks and Sanctuaries in course of formation, and in its more remote haunts. Naturalists regard the Sloth Bear of Ceylon as a distinct race.

The Malayan Bear of Chittagong and Burma is a smaller edition of the Himalayan Black Bear and merits little mention in this history of shikar as it is seldom met with or hunted.

Wild Dogs and Hyenas ; The Indian Wild Dog has an immense range. In earlier days the packs of these animals in forest areas were considerably larger than now. Apart from distemper and other diseases which keep the numbers in check, the fluctuation of the wild dog population must depend considerably upon food supply—mainly deer, pig and other forest animals. Fortunate is it for India that that the species does not attack man, and is not habitually destructive to domestic stock. Should it be more and more deprived of its natural food it may, like the tiger, increasingly prey upon the flocks and herds. The hyena of India is not ordinarily greatly inimical to human life. It is here mentioned as occasionally affording sport to the bobbery-pack, or the horseman with his spear.

Sheep and Goats: When the record Sind Wild Goat (52$\frac{3}{4}$ in.) was shot in the Kirthar Range in November 1912, considerable herds were seen ; of present stock there is no news. In Baluchistan the Persian Ibex may not have survived the influx of modern rifles ; nor will the toothsome Urial have fared better. The Persian Gazelle may have survived in a few places. Of the stock of all these animals in earlier days there is no literature available to the writer, but they probably existed in considerable numbers. The Suleiman Markhor is also an animal of the Baluchistan Hills. Soldier-sportsmen serving trans-Indus used to have fine sport and secure good heads of this race.

In Adams's day ibex were plentiful in Kashmir and Wardhwan; now they are no longer there, and have not been for a number of years. Only in the more remote nullahs of Baltistan, Gilgit and Astor could the sportsman now hope to find worth while ibex; and markhor may have almost vanished (Stockley, Vol. 32; 783). Both Adams and MacIntyre pointed out in their books what was happening, and what the result would be; while both Baldwin and MacIntyre remarked on the great diminution of game birds in the Terai and the Doon.

Small Game Shooting

In his Mogul Emperors series Sálim Ali, being an expert ornithologist, has given us some interesting information. In those days, and up to the period 1840–1860, the game birds of the hills and plains must have been everywhere in great numbers. Nature had evolved for them a high reproduction rate and they were able successfully to contend against all natural checks, and even with the amount of trapping and snaring to which they had been subjected through all the centuries. With the shotgun and its indiscriminate use there came a very great change; but some of this depletion was also due to the increased incentive to the people to snare game for the tables of the foreigners.

Now we have the present intensified diminution of all game birds for there has never been any thought for the morrow, and some species are nearing extinction. During the past few years there has been great opportunity for all game birds to recover in some measure their former abundance, for the changed conditions have made shooting of every description both difficult and expensive. But the apathy of Governments and the authorities, and the activities of trappers and snarers have nullified the opportunity as the demand for meat of any kind has become clamant, and modern communications have made it easy for the supply to reach both markets and consumers.

Failing speedy and suitable measures by Government, the outlook is exceedingly gloomy. Recently, an observer from a foreign land has said to the writer, 'You will lose *all* your game birds.'

Kashmir: Of Kashmir it is reported at the present time that there is depletion of the number of *chukor*. Large bags of wildfowl used to be made in Kashmir by sportsmen inclined that way. One of these shot 6998 duck and geese in one year; while another, also shooting alone, bagged 58,613 wildfowl in the seasons 1907–1919. He killed 119 grey lag geese in one day, and on another day 509 duck and teal.

Rajputana: In the well-known Bharatpur wildfowl shoots the bags were large. On 20th November 1916 there fell 4206 birds to 50 guns. Without any reference to anything here written or referred to, may be quoted 'Some prefer flighting, others shoot for averages and lose many of the delights of an exceptionally high bird, and there are those who will not pull trigger until three heads are in a straight line!'

In the Imperial Sandgrouse shoots huge were the bags. Perhaps the record may be that of the Bikaner shoot in 1921(?) when Lord Rawlinson was one of the party which killed in two mornings 5,968 birds. May be those large bags of wildfowl could still be made, but the world's wildfowl situation does not warrant such slaughter; and

perhaps those other big shoots are events of the past not likely to be repeated, for the times have changed.

In India there is now urgent need for a nation-wide fixed close time for the shotgun from 1st April to 30th September. If enforced, that would do much good; but the trappers and snarers must be dealt with by finding them alternative pursuits, as has been done for the toddy tappers in the cause of prohibition. And the shooting and consuming public must be taught to co-operate by refusing to shoot, buy or eat game birds and wildfowl during that period.

Hunting with a Bobbery-pack

The Emperor Akbar was extremely fond of good hunting dogs and imported them from several countries; those from the Hazara District would attack any kind of animal, even the tiger. A bull-mastiff or cross-bred dog of that 60 lb. type will fasten on the nose of the largest of buffaloes, tame or wild, and bring it to its knees within forty yards. In the 1870's Sir Montague Gerard used bull terriers to bring tigers to bay, but discontinued the practice because of inevitable casualties. It is all right to use dogs when following wounded tiger or panther, but too much courage is fatal, and unfair to the dogs.

Sport with a Bobbery-pack has been enjoyed by British sportsmen in India since the early days of the East India Company. Williamson has much of interest—management, feeding, kennels, diseases and care, and kindred matters—which are profitable to us even in these later days. He experienced, as have all who hunt the jackal, the instinctive faculty these animals have of 'shamming death'.

Among modern writers J. W. Best gives an excellent sixteen pages of his small book to the Bobbery-pack; and in the 'Sportsman's Handbook for India' a contributor with fifteen years experience describes his doings and lists jackal, hare, fox, hyena, wolf, blackbuck, gazelle, sambar stag, pig, wild cat and porcupine as having at one time or another fallen victims to his eager dogs. Burton contributes a chatty account 'Days and Doings with my Bobbery-pack' in the Hyderabad country during a number of years. It is essential that the dogs be well broken against 'riot' as to domestic stock; rabies has to be watched for, and there may be casualties from snake-bite.

In these greatly changed days a Bobbery-pack is almost a pleasure of the past, for a general charge of Rs. 3 a dog will not, as in 1904, cover the cost of feed, and the wages of a kennelman would be much more than Rs. 7 a month. The keep of a horse is four or five times as great, and everything else in proportion. Again, and again, *Eheu fugaces*!

Hunting with Foxhounds

When asked what he thought of fox-hunting, the great G.B.S. promptly replied in his own inimitable way, 'It is the pursuit of the uneatable by the unspeakable'!

This essentially British sport has not, for climatic reasons, at any time been universal in this country; but since 1776 when the Madras Hunting Society imported a pack of hounds from England, hunting has gone on uninterrupted in India up to the present day through a Hunt

Photo *H. H. The Maharaja of Bikaner*

Sambar or Rusa Deer (*Rusa unicolor*)

The Madras Hunt in Guindy Park, 1866 (From a painting by J. J. Fonseca)

being maintained at one time or another in a number of places. The list is a long one: Bangalore, Belgaum, Bombay, Calcutta, Dacca, Delhi, Jaipur, Jaora, Jullundur, Madras, Meerut, Mhow, Mysore, Ootacamund, Peshawar, Poona-Kirkee, Rawalpindi, and perhaps some more.

The Madras Hunt: Unfortunately the continuous records only date back to 1862; but from a letter in possession of Kenel Rigby, Esq., of Meriden Hall, Coventry, it is seen that a 'Hunt Society' existed in Madras as far back as 1776. That most interesting and informative letter is too long for reproduction here. At irregular periods from 1864 to 1875 professional huntsmen were employed. It was Squires of the Pytchley who hunted the Pack during that famous run in 1875 when King Edward VII, as Prince of Wales, was out. One of the characters of the later years of the Hunt was the Kennelman, Charlie, who did 55 continuous years service and remained with the Hunt unil it closed down in 1946. In the Adyar Club are some old records and many group pictures, one of which is reproduced with this contribution. The Bombay '*Onlooker*' for May and June 1940 contains fuller information regarding the Madras Hunt.

The Ootacamund Hunt: Ootacamund was 'discovered' in 1820, and hounds from Madras were kenneled there in 1829. Full information as to the Ooty Hunt is contained in, 'A Centenary Chronicle of the Ootacamund Hunt 1845–1945' by J. F. Smail, M.F.H. Gleanings from the Chronicle:

'The present kennels are easily the best in India, and even compare favourably with the best in England.' . . . 'Hounds have on many occasions been killed by panther, but there is only one record of "riot" after a panther.' . . . 'The ideal type of hunter is a sound, quality horse, not more than 16 hands, with a placid temperament.' . . . 'The ideal hound for Ooty is a large harrier, say 21″ to 23″.' . . . 'It is not the size of the pack, but the quality which tells.' . . . 'I personally prefer a pack of 11 couples to a larger one.' . . . . 'There is no doubt that first class hounds suited to local conditions can be bred generation after generation in India with occasional blood from home.'

4th June 1903 provided the best run that is known—well over nine miles, and one hour and ten minutes. 1913 furnished a sixteen-mile hunt lasting one hour and forty minutes.

Connected with the Hunt is the annual Point-to-Point Race, the Ootacamund Hunt Cup, the Ladies Cup, the Peter Pan Cup. Appendix X of Chronicle gives origin of 121 names of nullahs, sholas, etc., entered on the Hunt Map. The Hunt still flourishes. Long may it continue.

Two Lesser Hunts: When the writer was in Belgaum in 1890 he hunted with Colonel Sherringham's hounds. The Mysore Hunt was in existence during 1932–1936 and showed good sport during May to January on alternative Tuesdays, Thursdays and Saturdays with 30 couple of foxhounds, imported and country-bred. A non-subscription pack of which the Patron was H. H. the Maharajah of Mysore and the Master, Prince Jaya Chamrajendra Wadyar Bahadur.

The Bangalore Hounds: This country was first hunted many years ago by a Bank Manager who ran a very good show in tip-top style at his own expense. He left India and the pack was not kept up. Between 1905 and 1910 the 30th Lancers (Gordon's Horse) ran a useful pack. After a considerable interval the pack was again set going in May 1924 and known as Captain Buckley's Hounds until, in 1929, when the Hunt was well established, the Hounds were purchased by the Bangalore Hunt Club by whom the Hunt was conducted until it closed down in January 1948.

Gleanings from Captain W. H. Buckley's notes:

'Some of our best country is the very best in India and better than most provincial countries at Home.' . . .

'The country-bred hounds have again shown that those who say C. B.'s are mute or small, are liars!' . . . 'A big pack, 30 to 35 couple, is an economy.' . . . 'Due to an equable climate never a case of distemper in seven years.' . . . 'You must have "Music" and for this in Bangalore the Welsh hound is supreme.' (Welsh also asked for by Madras in 1776.)

Bombay: Hunting began in Bombay about 1811, but the Bombay Hunt was constituted in 1865. It has now been combined with Poona and Kirkee and is known as 'The Bombay Hunt and Poona & Kirkee Hounds.' It is distinct from 'The Jackal Club' which has existed since 1889 and is still going strong.

Mhow and Meerut: In 1906, perhaps earlier, and up to 1927 at any rate, there was a pack of foxhounds at Mhow. Later information is lacking.

The Meerut Hunt was formed by Major W. T. V. Wooley, M.F.H. with hounds obtained from the Delhi Hunt before it closed down in 1945. Present strength is 19½ couples, and the M. F. H. is Lieut.-Colonel D. R. Sahni, R.V.F.C. Hound puppies now receive Indian names. Hounds meet every Sunday and bye-days are arranged on holidays. Attendance varies between 25–30 at a Meet; and some members of the Diplomatic Corps come from Delhi—40 miles—to ride with the Meerut Hounds. The present C-in-C in India is the Patron-in-Chief, and but for his active and enthusiastic support and guidance the Meerut Hunt would have closed down.

Peshawar: Hunting was first started in Peshawar in 1863 with 'Hussay's Regimental Pack'. In 1865 the 19th Foot brought their pack, and it hunted during 1865–66 under the name of 'The Green Howard's Pack.' In 1869, on transfer to England, the regiment presented its pack to the Station at Peshawar on condition that it should remain there. The pack then became known in 1869 as 'The Peshawar Vale Hunt' and had its first meet under this name on 2nd February 1870.

The P.V.H. has hunted every season since 1870 with the exception of 1880 when the pack was taken to Kabul during the Second Afghan War. Owing to an unfortunate circumstance the season 1950–51 was the first since 1863—excluding 1880—when there was no pack in Peshawar. In November 1951 hounds were flown out from England under arrangements made by the Pakistan Army. Long may the P.V.H. flourish and show fine sport.

Pigsticking or Hog-hunting

The sport of chasing the wild boar on horseback with a spear was introduced by British sportsmen in Bengal in the latter part of the eighteenth century. At first the sloth bear was hunted; but in 1776 it was the wild boar, the weapon used in the Dacca District being a short, heavy spear three feet long and well poised. It was thrown like a javelin; and if the sportsman missed his aim he had to dismount and recover his weapon, thus letting in the next in succession, and so on till the pig was killed.

The modern spear is up to 6 ft. 3 in., long and fairly heavily leaded —about 1¾ lb. On the Bombay side the spear was eight to ten feet or even more, and often unleaded.

Twenty-five years later a jabbing or thrusting spear was in use in Upper India, but the practice developed in Bengal was to use a spear about seven or more feet in length, also thrown as a javelin as is well described and illustrated in Williamson's 'Oriental Field Sports', 1807. We know from Simson that in 1830 the throwing of the spear was discontinued, and penalized by the Calcutta Tent Club at the instance of Mr. Mills, B.C.S. Published in 1880, Simson's book contains complete guidance to everything pertaining to pigsticking in Eastern Bengal up to that time; and, except as to localities, is of equal value at the present day.

All regarding the sport as developed in Upper India is contained in the article by Neville-Taylor in the 'Sportsman's Handbook for India', with which is a map showing the pigsticking centres and Tent Clubs of those parts in 1904.

'Modern Pigsticking' by Wardrop covers practically all of India and is a complete compendium of pigsticking. The Meerut Tent Club country is fully dealt with; also the Kadir Cup which was constituted in 1869 and the winning of which has been the blue ribbon of pigsticking. Among the hazards related by Wardrop is that of a pigsticker's Arab horse, having swum a river, being seized by the head by a crocodile while drinking in shallow water, dragged into deep water and never seen again; and Kinloch, when hunting with the Meerut Tent Club, had his horse ripped, himself thrown and wounded by the boar in *fifty* places!

The Nagpur country is well described by Best and Dunbar Brander.

Praise of the Boar: 'It can be said that the finest and most spectacular animal of the Indian jungles is the tiger, the most noble in appearance the elephant; but the concensus of opinion is that the Indian wild boar is the bravest and most gallant of all.' . . . 'Nothing for size and ferocity could surpass, if it could equal, the pure Bengali breed; other hunters, however, declare the Deccany pig to be unrivalled for speed and ferocity.'; while a widely experienced expert has declared, 'Give me a Bengali hog in Guzerat country.' . . . 'No man who has not been an eye-witness of the desperate courage of the wild hog would believe in his utter recklessness of life, or in the fierceness that will make him run up the hunter's spear, which has passed through his vitals, until he buries his tusk in the body of the horse, or, it may be, in the leg of the rider.' . . . 'The hunter loses his seat at the peril of his life.'

Praise of Pigsticking: Pigsticking is the grandest sport that India or any country affords. 'Some have condemned pigsticking as cruel, yet of all sports this is the only one practised in modern times where the hunter shares, on almost equal terms, the danger with the hunted. It has a code of honour; the boar is hunted with respect and pursued on certain fixed principles; and there is a *casus belli*, for he is an incorrigible plunderer.'

An enthusiast has composed the following imperishable verse:

'Youth's daring spirit, manhood's fire,
Firm seat and eagle eye,
Do they require who dare aspire
To see the wild boar die.'

Under the altered conditions in India pigsticking is now almost a dream of the past, and all the above of little more than academic interest.

There are two records in the Society's journal of a wolf being ridden down and speared, or shot, by a single horseman. Only in favourable country can the feat be accomplished, and the horse must have a good stride and be in really hard condition, for the distance covered may be 16 to 18 miles. A gorged wolf is easily dealt with. Here it may be remarked that there is no record of the Indian Wild Ass having ever been run down by a single horseman. The animal is able to attain, and keep up without difficulty, a speed of 30–32 miles per hour.

Falconry

Hawking is not now so much practised in Rajputana and Northern India as it was even sixty to eighty years ago. In 1908 an expert modern falconer wrote, 'A few days' roaming about a river bank with a net, a set of nooses and some mynahs and sparrows in a cage, and I had collected two peregrines—one a laggard and the other a splendid dark bird in her first year—a *saker*, a *luggar* and two merlins, and within a month was ready for houbara, herons, paddy-birds, crows, kites, hoopoes and larks, and surely it would be a bad day on which I could not find one or other of the above. The *saker* I kept exclusively for kites, the young peregrine was all there when she saw a heron, and both had been "entered" to houbara.'

The list of animals and birds which can be captured through falconry in India is a long one: antelope, gazelle, hares, cranes, egrets, herons, ibises, spoonbills, stone plovers, storks, houbara, florican, jungle-fowl, partridges, peafowl, sandgrouse, crows, kites, grass owls, vultures, hoopoes, larks, rollers, sparrows.

In the *Journal of the Bombay Natural History Society* 'The Review of the Accipitres' is of the greatest interest; and the article, 'Shakespeare on the Noble Art of Hawking' is of interest not only to lovers of Shakespeare.

Fishing

Bombay: The Bombay Presidency Angling Association was started in Bombay with its centre of activities at Powai Lake about 1932 by the late Mr. H. B. Hayes of the American Express Co. Inc., Mr. J. G. Ridland of the Imperial Bank of India and few others, the fishing rights being secured from the Bombay Municipality.

In the initial stages the only fish available were minnows (*Rasbora daniconius*) and olive carp (*Barbus sarana*), but several thousand fry of rohu and catla were released in the lake, and they have grown both in size and numbers. The club is now well established with a membership of over a hundred, and the lake teems with rohu and catla, the former scaling between 20 and 30 lb. while a 65 lb. catla was landed a few years ago. As usual, much heavier fish are said to have got away! More fry have again been recently released and the lake is well stocked for many years.

Madras: The Angler's Club initiated in Madras in 1946 was short-lived. It would seem that India is not yet ready for an Angling Association on Western lines. Perhaps the Angling Club now (1952) proposed to be formed in Mysore State may have more lasting success.

Books on angling in India are listed in my 'Bibliography of Big Game Hunting and Shooting in India and the East.' (*J.B.N.H.S.* 49; 222–241).

Trout of the East and the West

The so-called 'Indian Trout' of the rivers of Central India, Northern India, Assam and Burma is a worthy rival of the trout and grayling of Western countries. But the successful introduction of the trout of those lands in the upland streams and lakes of Ceylon, the Nilgiri and Travancore Hills, Kulu and Kashmir has brought great enjoyment to many anglers; and there is the landslide-formed Guhna Lake in Garhwal which has proved to be a natural spawning ground and is said to be one of the best trout fishing areas in this country. It is now only two marches from Chamoli where is the terminus of the bus route from Hardwar to Badrinath. Six marches from Tehri is the Dodhi Tal (lake) in Tehri Garhwal where the trout are large and five pounders common.

Regarding the introduction of trout into India pp. 601–3 of the article 'History of transplantation and introduction of Fishes in India', by S. Jones and K. K. Sarojini, published in Vol. 50 No. 3 (April 1952), may be seen.

In these days of the motor vehicle the angler in India has quicker access to localities than formerly; and through hydro-electric projects a number of lakes have been formed. On the other hand, these same projects, and certain canal weirs also, have adversely affected migration of important species to spawning grounds, thereby greatly altering some of the rivers and streams of the country to the detriment of the angler and the food supply of the people alike.

From articles in the *Journal*, and earlier angling books and records, it seems that on the whole the angler is not able at this time of writing to have equal success with mahseer in running waters as in former days. Assam has always been a grand province for the angler, but those formerly prolific waters will have been much altered by the recent earthquakes.

The issue in the *Journal* in serial form of the book by A. St. J. Macdonald, 'Circumventing the Mahseer and Other Sporting Fish in India and Burma', and its publication by the Society as a book in 1948 was a notable event.

The Society's journal contains close on 300 articles and Miscellaneous Notes on all aspects of fish and fishing both from the angle of sport and of commerce.

In 1907, following the publication in the *Journal* of certain papers (Vol. 17; 637–644) the Society moved the Government of Bombay in respect to legislation for protection of fisheries in Western India; and on 16th January 1908 (Vol. 18; 668–669) addressed the Government of Bombay asking that the expediency of creating a Fisheries Department be favourably considered. That led to useful results in many directions; but from a New Delhi press report of 10th May 1952 it is apparent that even after all these years a great deal remains to be done.

Of the 1,00,00,000 maunds of fish taken from the sea in each year only 32 per cent is consumed as fresh fish. This, says the report is due to unsatisfactory transport facilities, inadequate supply and distribution of ice and marketing facilities. Other defects are scattered fishing centres and primitive methods of catching, preserving, transporting and marketing. It is emphasized that with proper arrangements and scientific control the fishing industry can make a substantial addition to the country's food resources. So much as regards sea and maritime fishing.

Inland, the activities of the Fisheries Departments have been in recent years principally directed towards stocking of lakes and tanks. Running waters have not received adequate attention. Moreover, the malpractices declaimed by Day and Thomas over eighty years ago—wanton destruction of the nation's fishery resources through use of explosives, fish poisons, capture and waste of fish fry and spawners—have not at all abated, and are getting worse. India should emulate the example of the Philippines where a favourable public opinion in these matters has been brought about.

Defects in regard to running waters have been pointed out by several contributors—Hamid Khan (Vol. 43; 416–426) and (Vol. 46; 193–194); Setna and Kulkarni (Vol. 46; 126–132); and there is a valuable article in two parts by Jones (also in Vol. 46) with which is a long reference list. Fishing contrivances in the Hyderabad State are dealt with by Mahmood and Rahimullah (Vol. 46; 649–654); and there is a note by H. de B. Codrington pointing out how much has yet to be discovered in regard to the Mahseer, the premier sporting fish of India.

The illustrated article, also published in pamphlet form, by Spence and Prater on the 'Game Fishes of Bombay and the Deccan' is valuable to anglers. Indeed, the Society through its *Journal* has done much to aid and inform regarding the land and sea fish and fisheries of the sub-continent.

* * * *

Evolution of the Sporting Rifle

The early days of European sportsmen in India were those of the flintlock, powder horn and bullet pouch. Then came the percussion cap followed by the breech-loader. The accuracy of those 18-bore muzzle-loaders was obtained by a sharp twist of rifling necessitating the small charge of 1¼ drs. of powder which gave a high trajectory to the spherical bullet of hardened lead, and insufficient shock to the animal. To remedy this, bullets containing an explosive charge were also used

by Rice and his companions in Rajputana during 1850–1854 when sixty-eight tigers were killed, some of them having to endure up to a dozen bullets, and another thirty wounded but not recovered.

The Express System: About 1840 Sir Samuel Baker introduced the large bore rifle with a heavy charge of powder; and in the 1860's arrived the 'Express' system devised by Forsyth. In the beginning, the hollow-pointed conical bullets had insufficient base. This caused much wounding of animals and, even as late as 1895, a number of tiger and panther maulings and fatalities. When the bullet was improved and used by discriminating sportsmen the black powder Express was an efficient weapon against soft-skinned animals. Even now, some tiger-slaying sportsmen are partial to the ·577 D.B. black powder Express taking 75 grains Nitro powder and a 650 grains conical bullet. The Forsyth system of the 12 bore rifle with slow spiral rifling was in vogue until the late 1890's, the bullet being either spherical or blunt conical. Some designs of the latter contained an explosive charge detonated by impact in the animal. Meade's spherical explosive bullet was used in shotguns.

H.V. Smokeless Powder Rifles: With the advent of smokeless powder, black powder weapons were superseded and there arrived 'the battle of the bores' 'which sportsmen of experience resolved into a small bore (under ·400) magazine rifle with the 'Nobeloy'-jacketed solid soft nose bullet of weight not less than 180 grains for hill shooting; and, as a constant companion in plains forests the ·375 Magnum magazine which, for an initial shot, is equal to any animal met with. The weapon ordinarily used for dangerous game, or following up wounded animals is the D.B. H.V. rifle of the ·470 class.

Space does not permit of detailed mention of the 'Paradox' and other systems as big game weapons, or the various types of expanding shotgun bullets; or the miniature rifles such as ·295, ·300, and ·310 advisable for antelope and gazelle shikar in populated open spaces.

Big Game Photography in India

Wild Life Photography is a modern sport of a high order, perhaps more especially in the wide, open spaces of the hills and plains. The man with a rifle has his difficulties; but the sportsman-photographer who has to take his 'shot' at a much closer range and bear in mind half a hundred things of importance before he can press the camera trigger has to be a stalker almost in a class apart.

The first book on big game photography in India—'With a Camera in Tiger Land'—was published by Champion in 1927. This pioneer work attracted much attention and was followed three years later by 'The Jungle in Sunlight and Shadow,' by the same author. Many of the photographs in these books were taken at night by automatic flash-light apparatus; so also most of the 120 photographs in the two sumptuous volumes by Bengt Berg. The article on 'Measurement and Photography of Big Game' by Stockley is good guidance to the shikari-photographer and the sportsman.

Success with his camera in the forests of Burma is illustrated in the two articles by Peacock; and the late Theodore Hubback enriched the *Journal* with five photographs and thirteen pages of valuable information

as to the habits and hunting of the Malayan Gaur, or Seladang. This was followed by his article 'Wild Life Photography in the Malayan Jungles' portraying elephant, seladang and sambar at salt-licks together with eleven pages of great value and interest—Apparatus, Hides, Taking the Photographs, Outfit, The Menace of Damp, Animal Psychology. In another article the vanishing Two-horned Asiatic Rhinoceros (*Dicerorhinus sumatrensis*) is fully written up and pictured by Hubback, with additional notes by Prater, the whole forming a monograph on the species.

The finest-ever photograph of a wild bull elephant taken in the Thayetmyo Yomah of Burma by W. S. Thom at a few yards distance with a 17½ inch Ross Telecentric Lens, and the thirteen pages of this most interesting contribution are a delight to shikaris.

At the present time the Society has valued contributions from the camera and pen of E. P. Gee of Assam.

Wild Life Preservation

About the middle of the eighteenth century the animals of the open country were still in much the same numbers as they had always been, but following the advent of sporting firearms in increasing number, and the pressure on the land through a growing population, the stock of antelope and gazelle all over the country has been greatly reduced—almost to vanishing point in some places. In areas of Upper India where antelope of both species still have a measure of protection on religious grounds they are still in fair number; but outside those special localities they are becoming more and more scarce.

Through the length and breadth of India it is no longer possible for the traveller to view these lovely creatures from railway or motor car window. In that respect there is a lifeless landscape; nor does the former common sight of a stately bustard now delight the eye.

Everywhere the Great One-horned Rhinoceros is now protected. The wonder is that it has survived its relentless pursuit by poachers and the indiscriminate shooting of it by sportsmen in earlier days. The Wild Buffalo should be under strict protection. The tracking and shooting of a solitary bull has afforded genuine sport.

The Indian Gaur, or 'Bison' seems at present to be holding its own; but too many are shot, some are being poached for meat, and the species is subject to cattle diseases—so there is no room for complacency.

None of these animals should be shot except on foot, and not by driving. If that is not possible they should be left alone, for what sport is there in slaying them from an elephant or in a beat?

It is much to be feared that the Brown Bear of Kashmir and adjacent hill territories is approaching extermination because of its handsome pelt. A male has been measured to be 7½ ft, with girth of 58½ inches. Weight about 500 lb. The Himalayan Black Bear was formerly in great number in Kashmir and Poonch, but much toll of the species has been taken by sportsmen, and also in organized drives on the ground that the animals are not only destructive to crops but often maul and kill the villagers.

Owing to its widely extended forest and mountain habitat, the species is not yet in danger of extermination. Notwithstanding all the poaching and malpractices, there is still, in some places and due to

local circumstances, a fair but decreasing number of sambar, chital, swamp deer, hog deer, and barking deer. Because of its commercially valuable scented pod the Musk Deer is being everywhere slain.

In Burma the Brow-antlered Deer survives only in zoological gardens, while the Manipur race is extinct.

Survival of the elephant where it exists in a wild state is due to the Elephant Preservation Act, 1873, since when proscribed males only may be killed. Recently, in the Madras State, interested parties have obtained the retrograde step of an alteration in the law to permit of females also being proscribed in the cause of cultivation.

In earlier days wolves were a real menace to the people in many parts of India. Williamson (1780–1806) relates how the troops used to assist in smoking them out of dens, and shooting, trapping and killing them by various methods. The wolf, being a creature of the open country, has been greatly reduced through extension of cultivation; yet, in a few areas, the animal still gives sporadic trouble.

Kashmir in 1924. Of preservation of game in Kashmir, Ward rightly remarked: 'When we consider the difficulties experienced in preserving game in Great Britain we can imagine what has to be faced in the case of tens of thousands of square miles of rugged and mountainous country. It is useless to imagine that poaching in Kashmir can be stopped.' Since then the situation has greatly worsened. Ward's series on Kashmir and the Adjacent Hill Provinces is a complete *vade mecum* for the sportsman-naturalist.

Kashmir and India in recent years: Of the Kashmir Stag it was reported in February 1951 that since the 1947 troubles began there has been rapid disappearance of the species from localities where it was formerly abundant. The 1950 Pakistan report to the I.U.P.N. was that fauna is being rapidly diminished, and that military occupation of certain Himalayan regions has not bettered the situation; while the report from India said that the situation is gloomy and poaching extensive. The India report referred to the whole country and not to Kashmir in particular.

The Role of the Society: The influence of the Society towards Preservation of Game commenced in 1888, and has continued all through the subsequent years, as can be known through perusal of the many references published at pp. 620-22 of Vol. 47, and other contributions in later volumes.

The Society's Honorary Secretaries—Phipson, Millard, Spence, Sálim Ali, Humayun Abdulali and others—and the Curator, S. H. Prater have been ever mindful of the influence which can be exercised, and the Editors have given valuable aid through means of a number of important editorials. Had the experienced and expert advice contained in all the above—and in the special illustrated series in five parts compiled by Prater (Vols. 36-8)—been heeded by the various governments, administrations and departments the rapidly deteriorating state of affairs at present existing would not perhaps have come about. But there are many factors and facets in this matter.

In his address to the Society on the 17th March 1930 the President (H. E. Sir Frederick Sykes, Governor of Bombay), remarked that in this country we are confronted with the almost insurmountable difficulty

of persuading the masses to have any regard for the principles of wild life preservation; but there is now much more to it than that. Example is more than ever necessary; for a very great difficulty at the present time in India is the increasing number of officials with no interest in sport or natural history, and the rapidly lowering shikar ethics. Even among those who should know better, proper sporting considerations are subordinated to the hunger for meat and the 'something-for-nothing' attitude of mind of the man with the gun.

Want of Public Opinion: At the All-India Wild Life Conference held at Delhi in January 1935 it was declared that Indian Wild Life could only be saved by Public Opinion, and that legislation, however efficient, could do little in matters like these without the whole-hearted support of the Public. There is as yet no sign of a proper public opinion while there *has* been apathy, and even discouragement on the part of the authorities. 'Forests, while saving us from the ravages of flood and famine, can themselves become a menace to cultivation'; and there have been other utterances which are almost direct incitements to users of guns to turn them against wild life. As the present writer has said in letters to the newspapers, 'deer and other wild creatures are just lumps of meat and catchers of votes.'

Laws are enacted, rules are made and forgotten, for there is no continuity of official enforcement and no public opinion to keep them in mind.

India's Vanishing Asset: A comprehensive pamphlet stressing the urgent need for immediate steps towards conservation was printed in January 1948 and widely circulated, with covering letters from the Society and the author (R. W. Burton) to the Governors-General of India and Pakistan, to Prime Ministers and many other high officials; and a précis was circulated through the newspapers and press services all over the country. The pamphlet was printed in the Society's *Journal* (Vol, 47; 602-22) together with a list of 56 references. The Society's notice about it is at p. 792, Vol. 47. 500 copies of a Special Appeal relating to Reserved Forests was also distributed among divisional and other forest officers throughout the country. Later, a Supplement to the pamphlet by the same author (Vol. 48; 290–299) was cyclostyled and similarly circulated.

At no time did it seem that the above impassioned appeals had attracted any attention except for the one Miscellaneous Note [Vol. 48 588. (1949)] by M. D. Chaturvedi. But there is reason to suppose that sundry measures such as The Bombay National Parks Act, 1950; The Bombay Wild Birds and Wild Animals Protection Act, 1951; the Committee assembled at Delhi on 23rd and 24th July 1951; and now the Central Board for Wild Life appointed by the Government of India to preserve the Fauna of India (Press Note; New Delhi, 11th April 1952) have stemmed from the original pamphlet and other writings. The Hailey National Park and the United Provinces National Parks Act, 1935, resulted from the activities previous to the 1935 Delhi Conference.

A Central Board for Wild Life: This Board was constituted at Delhi on the 4th April 1952 by a Ministry of Food and Agriculture Resolution. It will function through States' Wild Life Committees and will meet at least once in two years.

If this Central Board and the States ' Committees have before them in correctly summarized form the principal contents of all the main wild life contributions to the *Journal*; the 16th October 1950 thirteen page Memorandum by the writer; and the Address delivered by M. S. Randhawa to the Section of Botany, 35th Indian Science Congress, Allahabad, 1949. (' Nature Conservation, National Parks and Bio-aesthetic Planning in India '), and study and apply all that is practicable in them there should be good results : *but* the States ' Wild Life Committees need to be formed quickly and all that is decided speedily put in motion or results will be of little avail, also too little and too late as has proved to be the case with previous Conferences and Committees.

A Department for Wild Life: It has to be conceded that no such Department will be formed in India—not yet awhile at any rate—but it was counselled by the Society [Vol. 38; 223. (1934)] that there is need for creating a definite agency within the forest department for administering the laws relative to the protection of wild animals. This is supported in the above-quoted note by Shri M. D. Chaturvedi, the present Inspector-General of Forests and a Vice Chairman of the new Central Board. A weighty consideration is that the success or failure of game preservation depends upon a wholly trustworthy and impeccable subordinate staff.

National and States Forest Policies: The recently announced Forest Policy for India should have excellent long-range effect on wild life in general ; and the C.P. (1st May 1952) Plan announcing 46 recommendations (including game reserves) for management and future development of the Madhya Pradesh protected forests, tree forests, minor forests, pasture lands, recreation forests, fuel and fodder reserves should be a valuable guide to other States and Unions.

South India and the Nilgiris: At the Meeting assembled at Ootacamund on the 7th June 1933 by the Governor of Madras it was decided to form an Association for the Preservation of Wild Life in South India. The project was launched, but within a year proved completely abortive and was never heard of again.

The only bright spot has been the mostly effective preservation of game in the Nilgiris District [41: 384-96 (1939)].

Ceylon: In December 1949 Ceylon attained the long sought for Wild Life Department, and the growth of it during 1950 gave hope that at last the menace of the professional poacher and the commercialisation of wild life would be halted.

Uttar Pradesh and Assam: The sub-montane tracts of the former United Provinces have always been well stocked with game animals and birds. With some exceptions this obtains at the present time. Let us hope that no Caliph will arise to alter all this.

In Assam there is now a strong movement associated with the names of P. D. Stracey and E. P. Gee. A thousand pities it began too late to save the Manipur race of the *thamin* from extermination, for there was sufficient warning of what was happening.

Burma and Malaya : In spite of vigorous efforts and warnings by Smith, Peacock, Weatherbe, and Hubback important species have vanished or are nearing extermination in these countries—

and this before the two countries were overrun by the Japanese during the last war.

Education in Schools: 'The youth of today must become the conservationists of tomorrow.' The Bombay Natural History Society has worked towards this end with, as yet, no widely extended results, and the present writer has been urging the need for the past five years. Sir Frederick Sykes (1930) said that we should aim at teaching the children to appreciate the value of wild life. In his address to the Ceylon Game and Fauna Protection Society on 14th December 1950 the Governor-General and Patron of that Society said, among other things, 'There is need for extensive propaganda and education, and the Government and this Society can co-operate to convince the younger generation in the schools that they will, and must be, the future custodians of wild life'—to which can be added 'and of the forests also.'

At the present time the International Union for the Protection of Nature is making considerable effort in this direction, and Italy, Greece, French Cameroon, Mexico, Belgium, Belgian Congo, Madagascar, and Turkey are issuing special lessons on the subject for the interest of educators and use by teachers and pupils in primary and secondary schools.

'In spite of its importance to mankind, the theme of these lessons is little known or totally ignored by contemporary nations.' How very true it is that,' Many are the paths along which man proceeds to (his own) destruction . . . '.

The Education Departments of Governments in India have a great responsibility in regard to education of the children in matters affecting wild life and world resources.

Conclusion

In the 1948 Pamphlet the writer remarked (Vol. 47; 618):

'An atmosphere of mistrust and suspicion is all too common among uneducated people, so the beneficial intentions of measures towards wild life preservation are apt to be misconstrued unless the objects and reasons receive the widest publicity through Government channels—and the newspapers.

The years are passing; this great national asset is wasting away. It is the duty of every government to preserve it for posterity. The urge should come from the highest levels.'

Opportunity is taken to again plead for the above, and for the essential whole-hearted aid by editors and journalists.

APPENDIX

A List of the Game Animals of India, Burma and Ceylon

Note.—(H). Hunza only; (B), Burma only. (C), also in Ceylon.

The Indian Elephant—*Elephas maximus indicus* (C)
The Great Indian Rhinoceros—*Rhinoceros unicornis*
The Smaller One-horned or Javan Rhinoceros—*Rhinoceros sondaicus.*

The Sumatran Two-horned Rhinoceros—*Rhinoceros sumatrensis*
The Malay Tapir—*Tapirus indicus*

Sheep

The Great Pamir, or Marcopolo's Sheep—*Ovis ammon poli*
The Great Tibetan Sheep, or Nyan—*Ovis ammon hodgsoni*
The Shapu of Ladak—*Ovis vignei vignei*
The Urial of Punjab—*Ovis vignei punjabiensis*
The Bharal—*Pseudois nahoor*

Goats

The Asiatic Ibex—*Capra sibirica*
The Sind Wild Goat—*Capra hircus blythii*
The Markhor—*Capra falconeri falconeri*
The Pir Panjal Markhor—*Capra falconeri cashmiriensis*
The Suleiman Markhor—*Capra falconeri jerdoni*
The Himalayan Tahr—*Hemitragus jemlahicus*
The Nilgiri Tahr—*Hemitragus hylocrius*
The Serow—*Capricornis sumatraensis*
The Grey Himalayan Goral—*Nemorhaedus goral*
The Brown Goral—*Nemorhaedus hodgsoni*
The Burmese Goral—*Nemorhaedus griseus* (B)
The Mishmi Takin—*Budorcas taxicolor*
The Indian Wild Ass—*Equus onager indicus*

Antelope and Gazelle

The Indian Gazelle—*Gazella bennetti*
The Persian Gazelle—*Gazella subgutturosa typica*
The Indian Antelope or Blackbuck—*Antilope cervicapra*
The Nilgai or Blue Bull—*Boselaphus tragocamelus*
The Four-horned Antelope—*Tetraceros quadricornis*

Deer

The Kashmir Stag—*Cervus kashmiriensis*
The Sambar—*Rusa unicolor* (C)
The Spotted Deer, or Chital—*Axis axis* (C)
The Hog Deer—*Hyelaphus porcinus* (C)
The Swamp Deer—*Rucervus duvaucelli*
The Brow-antlered Deer of Manipur—*Panolia eldi eldi*
The Brow-antlered Deer of Burma—*Panolia eldi thamin* (B)
The Barking Deer, or Muntjac—*Muntiacus muntjac*
The Mouse Deer, or Indian Chevrotain—*Moschiola meminna* (C)
The Musk Deer—*Moschus moschiferus*

Bovinae

The Indian Wild Buffalo—*Bubalus bubalis* (C)
The Gaur, or 'Indian Bison'—*Bibos gaurus*
The Banteng or Tsaing—*Bibos banteng birmanicus* (B)

Bears

The Himalayan Brown Bear—*Ursus isabellinus*
The Himalayan Black Bear—*Ursus torquatus*
The Sloth Bear—*Melursus ursinus* (C)
The Malayan Bear—*Helarctos malayanus*

Beasts of Prey

The Asiatic Lion—*Panthera leo persica*
The Panther—*Panthera pardus* (C)
The Tiger—*Panthera tigris*
The Snow Leopard, or Ounce—*Uncia uncia*
The Hunting Leopard, or Cheetah—*Acinonyx jubatus*
The Clouded Leopard—*Neofelis nebulosa*
The Caracal—*Felis caracal*
The Striped Hyena—*Hyena striata*
The Indian Wild Dog—*Cuon dukhunensis*

Tibetan Game Animals

The Yak—*Poephagus grunniens*
The Tibetan Antelope—*Panthalops hodgsoni*
The Tibetan Gazelle—*Gazella picticaudata*
The Tibetan Wild Ass—*Equus kiang*

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